

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) An inspecting circuit of a semiconductor device ~~characterized by~~ comprising:

a plurality of input terminal which is inputted with signals from a plurality of signal lines respectively; and

two output terminals at which an output of inspection can be obtained,

wherein a determination whether the semiconductor device is normally operated or not is performed by two signals obtained at the two output terminals.

2. (Currently amended) The inspecting circuit of a semiconductor device according to claim 1, ~~characterized by~~ the inspecting circuit further comprising:

a plurality of NANDs;

a plurality of NORs; and

a plurality of inverters,

wherein an output terminal of a NAND of i-th line (i is an integer number of two or more) in the plurality of NANDs is electrically connected to a first input terminal of a NAND of (i + 1)th line through the inverter;

wherein an output terminal of a NOR of i-th line (i is an integer number of two or more) in the plurality of NORs is electrically connected to a first input terminal of a NOR of (i + 1)th line through the inverter;

wherein the plurality of input terminals are electrically connected to second input terminals of the plurality of NANDs and second input terminals of the plurality of NORs respectively;

wherein an output terminal of a NAND of a final line in the plurality of NANDs is electrically connected to an output terminal at which a first output of an inspection is obtained; and

wherein an output terminal of a NOR of a final line in the plurality of NORs is electrically connected to an output terminal at which a second output of an inspection is obtained.

3. (Currently amended) The inspecting circuit of a semiconductor device according to claim 1, ~~characterized by~~ the inspecting circuit further comprising:

a plurality of NANDs;

a plurality of NORs;

a plurality of inverters; and

a comparator circuit,

wherein an output terminal of a NAND of i-th line (i is an integer number of two or more) in the plurality of NANDs is electrically connected to a first input terminal of a NAND of (i + 1)th line through the inverter;

wherein an output terminal of a NOR of i-th line (i is an integer number of two or more) in the plurality of NORs is electrically connected to a first input terminal of a NOR of (i + 1)th line through the inverter;

wherein the plurality of input terminals are electrically connected to second input terminals of the plurality of NANDs and second input terminals of the plurality of NORs

respectively;

wherein an output terminal of a NAND of a final line in the plurality of NANDs is electrically connected to an output terminal at which a first output of an inspection is obtained;

wherein an output terminal of a NOR of a final line in the plurality of NORs is electrically connected to an output terminal at which a second output of an inspection is obtained; and

wherein an output terminal of the comparator circuit is electrically connected to an output terminal at which an output of an inspection is obtained.

4. (Currently amended) The inspecting circuit of a semiconductor device according to claim 3, ~~characterized in that~~ wherein an ExNOR is used for the comparator circuit.

5. (Currently amended) An inspecting circuit of a semiconductor device ~~characterized by~~ comprising;

~~an inspecting circuit having~~ a plurality of signal output lines;

~~wherein the inspecting circuit comprises~~ a plurality of input terminals to which signals from a plurality of signal output lines are inputted; and

an output terminal at which an output of an inspection is obtained; ~~and,~~

wherein a determination whether the semiconductor device is normally operated or not is performed by comparing an output pattern obtained at the output terminal by a signal inputted to the plurality of input terminals and a reference pattern.

6. (Currently amended) The inspecting circuit of a semiconductor device according to

claim 5, ~~characterized by~~ the inspecting circuit further comprising:

a plurality of NANDs;

a plurality of NORs; and

a plurality of inverters,

wherein an output terminal of a NAND of i -th line (i is an integer number of two or more) in the plurality of NANDs is electrically connected to a first input terminal of a NAND of $(i + 1)$ th line through the inverter;

wherein an output terminal of a NOR of i -th line (i is an integer number of two or more) in the plurality of NORs is electrically connected to a first input terminal of a NOR of $(i + 1)$ th line through the inverter;

wherein the plurality of input terminals are electrically connected to second input terminals of the plurality of NANDs and second input terminals of the plurality of NORs respectively;

wherein an output terminal of a NAND of a final line in the plurality of NANDs is electrically connected to an output terminal at which a first output of an inspection is obtained; and

wherein an output terminal of a NOR of a final line in the plurality of NORs is electrically connected to an output terminal at which a second output of an inspection is obtained.

7. (Currently amended) The inspecting circuit of a semiconductor device according to claim 5, ~~characterized by~~ the inspecting circuit further comprising:

a plurality of NANDs;

a plurality of NORs;

a plurality of inverters; and

a comparator circuit,

wherein an output terminal of a NAND of i-th line (i is an integer number of two or more) in the plurality of NANDs is electrically connected to a first input terminal of a NAND of (i + 1)th line through the inverter;

wherein an output terminal of a NOR of i-th line (i is an integer number of two or more) in the plurality of NORs is electrically connected to a first input terminal of a NOR of (i + 1)th line through the inverter;

wherein the plurality of input terminals are electrically connected to second input terminals of the plurality of NANDs and second input terminals of the plurality of NORs respectively;

wherein an output terminal of a NAND of a final line in the plurality of NANDs is electrically connected to an output terminal at which a first output of an inspection is obtained;

wherein an output terminal of a NOR of a final line in the plurality of NORs is electrically connected to an output terminal at which a second output of an inspection is obtained; and

wherein an output terminal of the comparator circuit is electrically connected to an output terminal at which an output of an inspection is obtained.

8. (Currently amended) The inspecting circuit of a semiconductor device according to claim 7, ~~characterized in that~~ wherein an ExNOR is used for the comparator circuit.

9. (Currently amended) An inspecting circuit of a semiconductor device ~~characterized by~~

comprising:

~~an inspecting circuit having~~ a source driver which inputs a clock signal, a start pulse and a video signal and outputs a signal to a plurality of source signal lines in accordance with the clock signal, the start pulse and the video signal;

~~wherein the inspecting circuit comprises~~ a plurality of input terminals to which signals outputted to the plurality of source signals are inputted respectively; and

an output terminal at which an output of an inspection is obtained; ~~and,~~

wherein a determination whether the semiconductor device is normally operated or not is performed by comparing an output pattern obtained by a signal inputted to the plurality of input terminals and a reference pattern.

10. (Currently amended) The inspecting circuit of a semiconductor device according to claim 9, ~~characterized by~~ the inspecting circuit further comprising:

a plurality of NANDs;

a plurality of NORs; and

a plurality of inverters,

wherein an output terminal of a NAND of i-th line (i is an integer number of two or more) in the plurality of NANDs is electrically connected to a first input terminal of a NAND of (i + 1)th line through the inverter;

wherein an output terminal of a NOR of i-th line (i is an integer number of two or more) in the plurality of NORs is electrically connected to a first input terminal of a NOR of (i + 1)th line through the inverter;

wherein the plurality of input terminals are electrically connected to second input terminals of the plurality of NANDs and second input terminals of the plurality of NORs respectively;

wherein an output terminal of a NAND of a final line in the plurality of NANDs is electrically connected to an output terminal at which a first output of an inspection is obtained; and

wherein an output terminal of a NOR of a final line in the plurality of NORs is electrically connected to an output terminal at which a second output of an inspection is obtained.

11. (Currently amended) The inspecting circuit of a semiconductor device according to claim 9, ~~characterized by~~ the inspecting circuit further comprising:

a plurality of NANDs;

a plurality of NORs;

a plurality of inverters; and

a comparator circuit,

wherein an output terminal of a NAND of i -th line (i is an integer number of two or more) in the plurality of NANDs is electrically connected to a first input terminal of a NAND of $(i + 1)$ th line through the inverter;

wherein an output terminal of a NOR of i -th line (i is an integer number of two or more) in the plurality of NORs is electrically connected to a first input terminal of a NOR of $(i + 1)$ th line through the inverter;

wherein the plurality of input terminals are electrically connected to second input terminals of the plurality of NANDs and second input terminals of the plurality of NORs

respectively;

wherein an output terminal of a NAND of a final line in the plurality of NANDs is electrically connected to an output terminal at which a first output of an inspection is obtained;

wherein an output terminal of a NOR of a final line in the plurality of NORs is electrically connected to an output terminal at which a second output of an inspection is obtained; and

wherein an output terminal of the comparator circuit is electrically connected to an output terminal at which an output of an inspection is obtained.

12. (Currently amended) The inspecting circuit of a semiconductor device according to claim 11,

~~characterized in that~~ wherein an ExNOR is used for the comparator circuit.

13. (Currently amended) An inspecting circuit of a semiconductor device, ~~characterized by comprising:~~

~~an inspecting circuit having~~ a gate driver which inputs a clock signal and a start pulse and sequentially outputs a select pulse to a plurality of source signal lines in accordance with the clock signal and the start pulse;

~~wherein the inspecting circuit comprises~~ a plurality of latch circuits which sample a signal for inspection in accordance with the select pulse which is outputted sequentially to the plurality of gate lines; and

a plurality of input terminals to which output signals from the plurality of latch circuits are inputted; and

an output terminal at which an output of an inspection is obtained; ~~and,~~

wherein a determination whether the semiconductor device is normally operated or not is performed by comparing an output pattern obtained at the output terminal by a signal inputted to the plurality of input terminals and a reference pattern.

14. (Currently amended) The inspecting circuit of a semiconductor device according to claim 13, ~~characterized by~~ the inspecting circuit further comprising:

a plurality of NANDs;

a plurality of NORs; and

a plurality of inverters,

wherein an output terminal of a NAND of i-th line (i is an integer number of two or more) in the plurality of NANDs is electrically connected to a first input terminal of a NAND of (i + 1)th line through the inverter;

wherein an output terminal of a NOR of i-th line (i is an integer number of two or more) in the plurality of NORs is electrically connected to a first input terminal of a NOR of (i + 1)th line through the inverter;

wherein the plurality of input terminals are electrically connected to second input terminals of the plurality of NANDs and second input terminals of the plurality of NORs respectively;

wherein an output terminal of a NAND of a final line in the plurality of NANDs is electrically connected to an output terminal at which a first output of an inspection is obtained; and

wherein an output terminal of a NOR of a final line in the plurality of NORs is electrically

connected to an output terminal at which a second output of an inspection is obtained.

15. (Currently amended) The inspecting circuit of a semiconductor device according to claim 13, ~~characterized by~~ the inspecting circuit further comprising:

a plurality of NANDs;

a plurality of NORs;

a plurality of inverters; and

a comparator circuit,

wherein an output terminal of a NAND of i -th line (i is an integer number of two or more) in the plurality of NANDs is electrically connected to a first input terminal of a NAND of $(i + 1)$ th line through the inverter;

wherein an output terminal of a NOR of i -th line (i is an integer number of two or more) in the plurality of NORs is electrically connected to a first input terminal of a NOR of $(i + 1)$ th line through the inverter;

wherein the plurality of input terminals are electrically connected to second input terminals of the plurality of NANDs and second input terminals of the plurality of NORs respectively;

wherein an output terminal of a NAND of a final line in the plurality of NANDs is electrically connected to an output terminal at which a first output of an inspection is obtained;

wherein an output terminal of a NOR of a final line in the plurality of NORs is electrically connected to an output terminal at which a second output of an inspection is obtained; and

wherein an output terminal of the comparator circuit is electrically connected to an output

terminal at which an output of an inspection is obtained.

16. (Currently amended) The inspecting circuit of a semiconductor device according to claim 15, ~~characterized in that~~ wherein an ExNOR is used for the comparator circuit.

17. (Currently amended) An inspecting circuit of a semiconductor device ~~characterized by~~ comprising:

a plurality of NANDs;₂

a plurality of NORs;₂ and

a plurality of inverters,

wherein an output terminal of a NAND of i-th line (i is an integer number of two or more) in the plurality of NANDs is electrically connected to a first input terminal of a NAND of (i + 1)th line through the inverter;

wherein an output terminal a NOR of i-th line (i is an integer number of two or more) in the plurality or NORs is electrically connected to a first input terminal of a NOR of (i + 1)th line through the inverter;

wherein the plurality of input terminals are electrically connected to second input terminals of the plurality of NANDs and second input terminals of the plurality of NORs respectively;

wherein an output terminal of a NAND of a final line in the plurality of NANDs is electrically connected to an output terminal at which a first output of an inspection is obtained; and

wherein an output terminal of a NOR of a final line in the plurality of NORs is electrically

connected to an output terminal at which a second output of an inspection is obtained.

18. (Currently amended) An inspecting circuit of a semiconductor device characterized by comprising:

a plurality of NANDs;

a plurality of NORs;

a plurality of inverters; and

a comparator circuit,

wherein an output terminal of a NAND of i -th line (i is an integer number of two or more) in the plurality of NANDs is electrically connected to a first input terminal of a NAND of $(i + 1)$ th line through the inverter;

wherein an output terminal of a NOR of i -th line (i is an integer number of two or more) in the plurality of NORs is electrically connected to a first input terminal of a NOR of $(i + 1)$ th line through the inverter;

wherein the plurality of input terminals are electrically connected to second input terminals of the plurality of NANDs and second input terminals of the plurality of NORs respectively;

wherein an output terminal of a NAND of a final line in the plurality of NANDs is electrically connected to a first input terminal of the comparator circuit;

wherein an output terminal of a NOR of a final line in the plurality of NORs is electrically connected to a second input terminal of the comparator circuit; and

wherein an output terminal of the comparator circuit is electrically connected to an output

terminal at which an output of an inspection is obtained.

19. (Currently amended) The inspecting circuit of a semiconductor device according to claim 18,

~~characterized in that~~ wherein an ExNOR is used for the comparator circuit.

20. (Currently amended) An inspecting method of a semiconductor device ~~characterized~~ by comprising the steps of:

inputting signals outputted to all of a plurality of output signal lines to an inspecting circuit simultaneously;

obtaining an output pattern from the inspecting circuit; and

determining an operation of the semiconductor device to be good or defective by comparing the output pattern and a reference pattern.

21. (Currently amended) An inspecting method of a semiconductor device, ~~characterized~~ by comprising the steps of:

sampling signals for inspection sequentially in accordance with signals outputted sequentially from a plurality of output signal lines;

inputting all of the sampled signals for inspection to an inspecting circuit simultaneously;

obtaining an output pattern from the inspecting circuit; and

determining an operation of the semiconductor device to be good or defective by comparing the output pattern and a reference pattern.